

REMARKS

The Office Action dated September 27, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

As a preliminary matter, Applicants wish to thank the Examiner for the courtesies extended during the telephonic interview conducted on December 19, 2007. Applicants note that the Examiner has pointed out column 9, lines 16-18 of reference Meskanen as an additional citation which is allegedly pertinent to the claim recitations. Applicants have considered the above note portion in addition to the entire contents of Meskanen, and conclude that Meskanen does not anticipate the subject matter recited in any of the claims, as discussed in detail below.

Claims 2-30, 32-34, and 36-37 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 39-44 have been added. No new matter has been added and no new issues are raised which require further consideration or search. Claim 31 has been canceled without prejudice or disclaimer.

Claims 1-5, 12, 14, 16-21, 28, 30, and 32-38 were rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,434,389 to Meskanen (hereinafter Meskanen). The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in claims 1-5, 12, 14, 16-21, 28, 30, and 32-34.

Claim 1 recites method that includes camping, in an idle state, on a serving cell formed by a serving base station. The method further includes adjusting, in a network element of a mobile communication system, at least one element of control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information, wherein the control information controls cell change procedures of a user equipment camping in the idle state on the serving cell. The method also includes receiving, in the user equipment, the adjusted control information for controlling cell change procedures of the user equipment, said cell change being conducted from the serving cell to a target cell, and performing, in the user equipment, the cell change procedures based on the received control information. The method also includes controlling the cell change procedures based on said adjusted control information, wherein at least one neighbor cell is formed by a neighbor base station, and the user equipment is configured to receive signals from said serving base station and said neighbor base stations.

Claim 17, upon which claims 19, 20, and 32 are dependent, recites a mobile communication system including a network part configured to provide the fixed infrastructure of the mobile communication system. The network part comprises a serving base station configured to form a serving cell, and a neighbour base station configured to form a neighbour cell. The system further includes a user equipment comprising a receiver configured to receive signals from the serving base station and

from the neighbour base station. The network part further comprises a controller configured to control cell change procedures with control information, the cell change being conducted from the serving cell to a target cell. The user equipment further comprises a cell changer configured to perform cell change procedures based on control information received from the network part, wherein the receiver and the cell changer are configured to camp on the serving cell in an idle state, and wherein the network part further comprises an adjuster configured to adjust at least one element of said control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information.

Claim 33 recites a network element of a mobile communication system that includes a serving base station configured to form a serving cell, a neighbour base station configured to form a neighbour cell, and a user equipment camped on the serving cell in an idle state. The user equipment includes a receiver configured to receive signals from the serving base station and from the neighbor base station, the user equipment further includes a cell changer configured to perform cell change procedures based on control information, and a controller configured to control cell change procedures with control information. The cell change being conducted from the serving cell to a target cell. The apparatus further includes an adjuster configured to adjust at least one element of the control information according to a predetermined time pattern comprising time elements

having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information.

Claim 35, upon which claims 2-16 are dependent, recites a method that includes providing, in a network element of a mobile communication system, control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station. The method further includes adjusting at least one element of the control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information. The method also includes transmitting the adjusted control information to the user equipment and controlling the cell change procedures based on the adjusted control information.

Claim 36, upon which claims 18, 21-30, 39, and 40 are dependent, recites an apparatus that includes a controller configured to provide control information controlling cell change procedures of a user equipment camping in an idle state on a serving cell formed by a base station, and an adjuster configured to adjust at least one element of the control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information, wherein the controller is further configured to transmit the adjusted control information to the user equipment and control the cell change procedures based on the adjusted control information.

Claims 37 and 38 recite a means-plus-function and computer program claim variation of one of the above claims.

As outlined below, Applicants submit that Meskanen does not teach or suggest the all of the elements of the pending claims. Meskanen relates to prioritizing special cells in cell selection in a cellular radio network. The mobile station measures an average reception level of nearby cells. When the mobile station detects that a cell is one of cells of a special cell list stored in a memory, it checks first if the cell fulfils a minimum requirement of cell selection on the basis of the measured signal level. If the minimum requirement is fulfilled, the mobile station manipulates the calculation of the cell selection parameter of the special cell to the effect that the selection probability of the special cell is improved with respect to a normal cell. See at least the Abstract of Meskanen.

In further detail, a cell selection and calculation will undergo a manipulation process to increase the likelihood that the selection probability of a special cell (a preferred cell that is stored in memory) will occur. In addition to gathering a list of special cells and storing that information in memory, the special cells may be prioritized to further limit the list of potential candidates for a cell. When a mobile station is located in a home cell C12 (see FIG. 2 of Meskanen) the mobile station may be said to be in idle mode and camped on the base station that operates in the home cell C12. The MS will receive on the broadcast channel BCCH of the cell, system information which includes,

adjacent cell information and signaling power level parameters, such as, path loss parameters represented by C1, C2 etc. (see column 7, lines 45-50).

In one example, a parameter called LSA_CAMPING_MARGIN will be added to a path loss parameter C2 to provide an extra margin of signal integrity when selecting a super cell. The value of C2 may then be calculated for a super cell to ensure the higher priority when selecting a super cell (see column 8, lines 30-35). Meskanen further discloses that the parameter C2 can be calculated using other normal cell selection restrictions such as hysteresis when the location area changes, and time restrictions, etc. (Emphasis added)

“Hysteresis” is a word used to describe a system with some type of memory needed to establish a current system state at any given time, thus any changes to the system will require updated hysteresis information.

As for the “time restrictions” disclosed in Meskanen, the time restrictions do not teach or suggest the “predetermined time pattern” or “time elements” recited in the claims of the present application. For example, claim 1, recites, in part,

“...control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system, to form adjusted control information, wherein the control information controls cell change procedures of a user equipment camping in the idle state on the serving cell.”

The time elements, are recited in the claim as “having a characteristic profile in terms of a state of the mobile communication system.” Meskanen does not teach this feature of

the claims, and thus fails to anticipate the claims for at least that reason. In order to anticipate a claim under 35 U.S.C. §102, all of the claim limitations must be taught by a single prior art reference either expressly or inherently *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants submit that the mere mention of “time restrictions” cannot be used to anticipate the subject matter of claim 1, which recites, in part, “control information according to a predetermined time pattern comprising time elements having a characteristic profile in terms of a state of the mobile communication system.

The predetermined time pattern, and time elements having a characteristic profile in terms of a state of the mobile communication system, as recited in claim 1, are not taught by the “time restrictions” of Meskanen. (Emphasis added). Therefore, Meskanen does not anticipate claim 1, and similarly does not anticipate independent claims 17, 33 and 35-38. By virtue of dependency claims 2-16 and 18-44 are also allowable over Meskanen. Withdrawal of the rejection of claims 1-33 and 35-44 is respectfully requested.

Claims 7-11 and 23-27 were rejected under 35 USC §103(a) as being unpatentable over Meskanen as applied to claim 1 in view of U.S. Patent No. 6,181,943 to Kuo (hereinafter Kuo). According to the Office Action, Meskanen teaches all of the elements of claims 7-11 and 23-27 except for teaching inter-frequency. Therefore, the Office Action combined the teachings of Meskanen and Kuo to yield all of the elements of claims 7-11 and 23-27. The rejection is traversed as being based on references that

neither teach nor suggest the novel combination of features clearly recited in claims 1 and 17, upon which claims 7-11 and 23-27 depend.

Kuo discloses an apparatus and method which, in a wireless communication system, improves the quality of inter-frequency hand-offs from an existing call connection frequency to a new frequency by minimizing oscillating inter-frequency hand-offs between the existing call connection frequency and the new frequency, and by minimizing redundant and unnecessary tuning and searching at the new frequency.

Kuo does not cure any of the deficiencies of Meskanen, as outlined above. Specifically, Kuo does not teach or suggest adjusting, before the control information is received, at least one element of the control information according to a predetermined time pattern, thus forming adjusted control information, as recited in claims 1 and 17 upon which claim 7-11 and 23-27 depend. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Meskanen nor Kuo, whether taken singly or combined, teaches or suggests each feature of claims 1 and 17 and hence, dependent claims 7-11 and 23-27 thereon.

Claims 6 and 22 were rejected under 35 USC §103(a) as being unpatentable over Meskanen in view of U.S. Patent Publication No. 2002/0173275 to Coutant (hereinafter Coutant). According to the Office Action, Meskanen teaches all of the elements of claims 6 and 22 except for teaching the use of different carrier frequency for planning a radio resource control method in a mobile communication system. Therefore, the Office Action combined the teachings of Meskanen and Coutant to yield all of the elements of

claims 6 and 22. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1 and 17, upon which claims 6 and 22 depend.

Coutant disclose a telecommunication network that includes at least one terminal able to switch from idle mode to dedicated mode when a communication is established. The network also includes a plurality of cells on which the terminal can camp in idle mode or dedicated mode and controlled by base stations intended to manage such a switching when a communication is established.

Coutant does not cure any of the deficiencies of Meskanen, as outlined above. Specifically, Coutant does not teach or suggest adjusting, before the control information is received, at least one element of the control information according to a predetermined time pattern, thus forming adjusted control information, as recited in claims 1 and 17 upon which claim 6 and 22 depend. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Meskanen nor Coutant, whether taken singly or combined, teaches or suggests each feature of claims 1 and 17 and hence, dependent claims 6 and 22 thereon.

Claims 13, 15, 29, and 31 were rejected under 35 USC §103(a) as being unpatentable over Meskanen in view of U.S. Patent Publication No. 2002/0147262 to Lescuyer. According to the Office Action, Meskanen teaches all of the elements of claims 13, 15, 29, and 31 except for teaching idle states for planning a radio resource control method in a mobile communication system. Therefore, the Office Action

combined the teachings of Meskanen and Lescuyer to yield all of the elements of claims 6 and 22. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in claims 1 and 17, upon which claims 13, 15, 29, and 31 depend.

Lescuyer discloses communication systems and methods for allowing a single mode mobile terminal to support mobile assisted signal strength measurement operations in both a fixed frequency reuse based communication network and an adaptive channel allocation based communication network. Lescuyer does not cure any of the deficiencies of Meskanen, as outlined above. Specifically, Lescuyer does not teach or suggest adjusting, before the control information is received, at least one element of the control information according to a predetermined time pattern, thus forming adjusted control information, as recited in claims 1 and 17 upon which claim 13, 15, 29, and 31 depend. Therefore, Applicants respectfully assert that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Meskanen nor Lescuyer, whether taken singly or combined, teaches or suggests each feature of claims 1 and 17 and hence, dependent claims 13, 15, 29, and 31 thereon.

As noted previously, claims 1-44 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-44 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Sejoon Ahn
Registration No. 58,959

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

SA:dc

Enclosures: Petition for Extension of Time – 2 Months
Additional Claim Fee Transmittal
Check No. 18238